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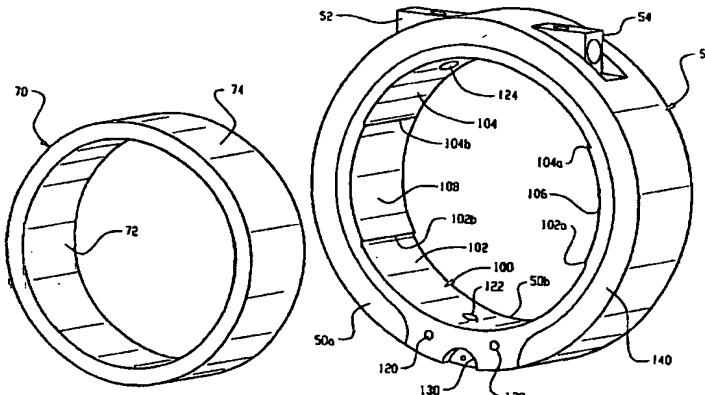
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(54) Title: CAM RING BEARING FOR FUEL DELIVERY SYSTEM



(57) Abstract: A bearing assembly is provided for a fuel delivery system that includes a pump (10) having a housing that rotatably receives a rotor (20) carrying vanes (26) thereon, a cam ring (70) received between the housing and rotor (20), and a support member of yoke (50) encompassing the cam ring (70) to selectively vary fuel flow. The bearing assembly (80) is a journal bearing between the yoke (50) and the cam ring (70) and includes an annular surface having a central opening therethrough. The annular surface includes a first, high pressure pad (102) and a second, low pressure pad (104) substantially diametrically opposite the first pad and separated by first and second lands (106, 108). The circumferential extent of the first pad (102) is at least as great as an inner diameter of the cam ring (70). Circumferential ends of the second pad (104) are wider than circumferential ends of the first pad. The first and second pads (102, 104) are formed by circumferentially extending grooves that extend an entire width of the bearing so that the cam ring moves between the first and second pads, and thereby varies a clearance between the lands (106, 108) and the cam ring (70).

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## INTERNATIONAL SEARCH REPORT

International application No.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : F03C 2/00  
 US CL : 418/173, 30, 31

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 NONE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	JP 02-086982 A (CKD CONTROLS LTD), 27 March 1990 (27.03.1990), see abstract.	1, 2, 4-8, 10-12, 16, 17
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Y		3, 9
X	US 3,143,079 A (CARNER) 04 August 1964 (04.08.1964), see entire document.	1, 4-7, 10-12, 16, 17
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Y		3, 9
Y	US 2,635,551 A (LANCEY) 21 April 1953 (21.04.1953), see entire document.	13-15
Y	JP 59-188077 A (MAZDA K.K) 25 October 1984 (25.10.1984), see abstract, see Figure 1.	13-15
A	GB 2,074,247 A (SKF KUGELLAGERFABRIKEN GMBH) 28 October 1981 (28.10.1981), see entire document.	1-17

Further documents are listed in the continuation of Box C.

See patent family annex.

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